AVAYA

Engage **The Power of We**™

Top 10 things you need to know about Avaya Fabric Connect

An enhanced implementation of Shortest Path Bridging

A completely new way to build networks, Avaya Fabric Connect delivers a simplified, agile and resilient infrastructure that makes network configuration and deployment of new services faster and easier. A standards-based network virtualization technology based on an enhanced implementation of IEEE 802.1aq Shortest Path Bridging and IETF RFC 6329, Avaya Fabric Connect combines decades of experience with Ethernet and Intermediate System-to-Intermediate System (IS-IS) to deliver a next-generation technology that combines the best of Ethernet with the best of IP. Avaya Fabric Connect creates a multi-path Ethernet network that leverages IS-IS routing to build a topology between nodes dynamically. Traffic always takes the shortest path from source to destination, increasing performance and efficiency.

Avaya Fabric Connect is an industry unique solution that offers a number of characteristics that set it apart from competing offers. The following Top 10 list below will give you a sneak peek of the advantages Fabric Connect offers:

> "Successful and rapid delivery of new applications is much easier following the introduction of Avaya Fabric Connect. We're now in position to say 'yes, we can do that."
>
> *– Phil Taylor, Leeds Metropolitan University*

> "Previously we needed six weeks for network changes; now with Avaya Fabric Connect we can implement them in days."
>
> *– Albert Knoll, Fujitsu*

1 It is more than just a Spanning Tree Replacement

Avaya's dynamic, real-time, service-based Fabric Connect technology is one of the most advanced network virtualization solution on the market today. Going beyond simple L2 multi-pathing capabilities, Avaya Fabric Connect delivers the full breadth of desired integrated services including Layer 2 virtualized services, Layer 3 virtualized services (with multiple Virtual Routing and Forwarding instances), and fully optimized routing and multicast services.

As a result, Fabric Connect enables businesses to gradually migrate away from a host of legacy overlay technologies (such as STP, OSPF, RIP, BGP and PIM) and to enable all services with a single technology – delivering unprecedented levels of network simplification.

2 It's for more than just the Data Center

While many network virtualization technologies are designed exclusively as Data Center technologies, Avaya Fabric Connect extends network-wide, providing a single service end-to-end delivery model. With Fabric Connect you can extend the power of virtualization into the campus and into geographically dispersed branch offices. Services can then easily be deployed via simple end-point provisioning where servers attach and where users attach, thereby increasing speed and agility.

3 It accelerates time-to-service through edge-only provisioning

Fabric Connect allows new services or changes to services to be implemented at the edge of the network – eliminating error-prone and time-consuming network wide configuration practices. Now, add new services or make changes to existing services in days rather than weeks or months. Fabric Connect also offers new levels of flexibility in network design. It allows any logical topology to be built, whether it is Layer 2, Layer 3, or a combination of the two – anywhere where there is Ethernet connectivity. Eliminate design constraints and have the freedom to build services wherever and whenever needed on demand.

4 It offers inherent Data Center Interconnect capabilities

Customers are demanding network virtualization solutions that are not confined to the four walls of the Data Center. Avaya Fabric Connect offers a single end-to-end service construct that can extend between multiple geographically dispersed Data Centers without requiring any overlay protocols or complex protocol stitching. This allows for resource sharing, seamless VM mobility and true active, active connectivity between Data Centers and any other Ethernet-connected enterprise location.

5 It delivers PIM-free IP Multicast that is scalable, resilient and easy to manage

IP Multicast is making a come-back. Many technologies such as next-generation video surveillance, IPTV, digital signage, desktop imaging, financial applications and some network overlays are reliant on Multicast protocols. Avaya Fabric Connect offers a scalable, reliable and efficient way of supporting IP Multicast Routing, without the onerous requirement of configuring, deploying, and maintaining a complex PIM overlay.

Imagine a Multicast network without RPF checks, rendezvous points and complex configuration. Enable Multicast at the edge of the network only, while offering increased scale and performance of the multicast applications. Eliminate your PIM induced headaches forever!

6 It offers inherent multi-tenant capabilities

Avaya Fabric Connect offers integrated Virtual Routing and Forwarding Instances. This allows for private IP networks to be set up quickly and easily across the fabric-enabled network without requiring any overlay protocols. These IP networks can reflect anything from different departments or entities in a traditional multi-tenant environment to separating different types of users (wireless guests, executive access) and even isolating traffic types for enhanced security and/or support for regulatory compliance (i.e. banking transactions in a PCI DSS environment, medical imaging devices in a hospital). The best part is rather than complex configuration, these isolated networks can be deployed quickly and easy at the network edges with just a couple of lines of configuration.

7 It offers "lightening fast" recovergence times (sub-second)

The elimination of overlay protocols has a profound impact on the ability for the network to reconverge. Avaya Fabric Connect customers are experiencing recovery times of less than 50 milliseconds - network-wide - for core, link, or node failures. This represents a vast improvement over large OSPF routed cores and massive improvement when compared to average recovery times in PIM-based Multicast networks.

8 It scales to 16 million unique services

Many network virtualization technologies are based on VLAN virtualization which limits them to the 4096 ceiling. Avaya Fabric Connect, based on the Shortest Path Bridging standard, utilizes a 24-bit header allowing it to scale up to 16 million unique services.

9 It offers proven interoperability with other vendors SPB implementations

Avaya is committed to delivering an open and interoperable solution to market. We have been actively participating with other vendors to demonstrate Shortest Path Bridging interoperability through a series of public tests. The most recent interoperability test was conducted at Interop 2013 in Las Vegas with major industry vendors Alcatel Lucent, HP, and Spirent.

10 It is an important foundation to your SDN strategy

When it comes to SDN, Avaya's strategy is to first eliminate network complexity in order to provide a simple and flexible network foundation. Rather than adding overlays or additional protocols, and creating even more complexity than what we have today, Fabric Connect first streamlines the network then automates it though OpenStack-based orchestration functionality (via a Neutron plug-in). It provides a simplified and proven way to automate the service delivery process and evolve to the Software Defined Network of the future.

Learn more about Avaya Fabric Connect:

Avaya Fabric Connect - video on YouTube, Considerations for turning your network into a Fabric - Packet Pushers podcast, Network Virtualization Using Shortest Path Bridging and IP/SPB – White Paper